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**BEFORE THE HOUSE COMMITTEE ON TRANSPORTATION AND
INFRASTRUCTURE – SUBCOMMITTEE ON AVIATION**

**ON
FAA’S AGING ATC FACILITIES: INVESTIGATING THE NEED TO
IMPROVE FACILITIES AND WORKER CONDITIONS**

JULY 24, 2007

Chairman Costello, Congressman Petri and members of the subcommittee, thank you for inviting PASS to testify on the critical need to improve air traffic control facilities and worker conditions. The Professional Airways Systems Specialists (PASS) represents more than 11,000 Federal Aviation Administration (FAA) employees in five separate bargaining units throughout the United States and in several foreign locations. The largest PASS bargaining unit is the Air Traffic Organization Technical Operations unit, consisting of technical employees (systems specialists, electronics technicians and computer specialists) who install, maintain, repair and certify the radar, navigation and communication systems making up the air traffic control system.

For many years, the FAA has neglected its infrastructure, specifically the buildings and facilities that house National Airspace System (NAS) equipment and systems and the employees who operate and maintain the equipment and systems. Since the condition of the infrastructure has always been a low priority for the agency, employees work in conditions that are unsafe, sometimes significantly interfering with their ability to perform their jobs as effectively and efficiently as necessary to ensure the integrity of the aviation system. While there are some FAA locations where facilities are not neglected, many FAA facilities are decades old and in need of major repair or replacement. Leaking roofs, deteriorating walls and ceilings, and obsolete air conditioning systems are among the varied problems technicians encounter everyday—problems that potentially endanger the lives of these employees and the efficiency of the aviation system. In fact, in several cases, the FAA is in direct violation of safety regulations, including those mandated by the Occupational Safety and Health Administration (OSHA).

Although there are a variety of issues that plague the NAS infrastructure, we have organized the problems into three categories that highlight the widespread problems. These categories include employee exposure to mold, asbestos, radiation or other harmful conditions that interfere with employees' ability to perform their work and, more importantly, have the potential to impact their health; unstable building and infrastructure conditions that threaten safe working conditions; and the impact these infrastructure issues have on vital air traffic control systems and equipment.

Exposure to Mold, Asbestos, Radiation or Other Harmful Conditions

In numerous instances, the FAA has ignored for years conditions in which exposure to harmful contaminants is a major issue. At numerous facilities across the nation, employees are exposed to dangerous levels of mold, asbestos, leaking radiation or other hazards. Exposure to mold and asbestos is the most prevalent of these problems, with examples existing at facilities nationwide.

According to OSHA, mold can cause adverse health effects by producing allergens and these health concerns are “important reasons to prevent mold growth and remediate existing problem areas.”¹ OSHA details several ways in which a facility can prevent the growth of mold, including repairing leaks as soon as possible and ensuring proper moisture and condensation levels.² Regardless of these specific guidelines, technicians in the field relate several instances where leaks have gone unrepaired

¹ U.S. Department of Labor, Occupational Safety and Health Administration, Directorate of Science, Technology and Medicine, Office of Science and Technology Assessment, “A Brief Guide to Mold in the Workplace,” SHIB 03-10-10 (Washington, D.C.: October 10, 2003).

² 29 CFR 1010.1001, Appendix G.

for years or ventilation systems have not been properly maintained, leading to increasing levels of humidity and moisture. All of these conditions, according to OSHA, are ripe for production of molds.

Contact with asbestos presents an even greater health risk. According to OSHA, asbestos can cause “disabling respiratory disease and various types of cancers” and the symptoms of these diseases “generally do not appear for 20 or more years after initial exposure.”³ Therefore, many FAA employees are being exposed on a daily basis to chemicals that may not affect their lives for two decades.

Disturbing examples of exposure to mold and asbestos can be found at numerous facilities nationwide. It cannot be overstated that in many situations, the harmful conditions have existed for years without the FAA addressing the problems. Employees working at the non-directional beacon facility in Rutland, Vt., are being exposed to dangerous inhalants on a daily basis (see Pictures A and B). Asbestos tiles are cracked and broken and there is black mold on the walls of the facility, creating a serious health hazard for personnel. The asbestos problem was originally identified in 2004 and has yet to be addressed; nonetheless, this facility is still fully commissioned and FAA employees are performing regular maintenance within this building. Other examples of the FAA’s disregard of these problems include asbestos being detected at the Remote Communications Air to Ground site in Garden City, Kan., for over five years without any effort being made to replace the flooring; and mold being a problem at the Houston Hobby Very High Frequency Omnidirectional Range (VOR) in Texas for over seven years.



Picture A
Non-Directional Beacon Facility, Rutland, Vt.



Picture B

In one recent example, only negative attention from the media, resulting from a PASS press release, finally spurred the FAA to action. In December 2006, PASS issued press releases detailing the unsafe working conditions of facilities in Detroit. Six facilities in the Detroit area were inundated with mold, asbestos, radiation and other hazards. Leaking radiation was also detected at a Detroit Radar facility and reported to the FAA, but the FAA took two months to address the problem. However, PASS understands that the air traffic controllers continue to have problems at the tower in Detroit.

³ Id.

While exposure to mold and asbestos may be the most common of health issues associated with deteriorating or aging infrastructure, it is certainly not the only health-related problem for technicians in the field. For instance, radiation exposure has become a major concern at several facilities. In one example from March 2006, PASS reported on an occurrence at a radar facility in Vermont where employees were unknowingly being exposed to potentially hazardous levels of radiation for at least six months due to radiation leaks inside the long range radar facility. The radiation leaks had been first detected in August 2005, but FAA supervisors waited until February 2006 to alert the workers. In June 2005, at the same facility, several employees were negligently exposed to PCBs, a mixture of chemicals demonstrated to cause a variety of adverse health effects by their supervisor when instructed to clean up an oil spill. Although the FAA has since made moves to correct these problems, there is no way to measure the future health impacts this exposure may have on employees. In order to ensure employees are not continuing to be exposed to radiation, PASS, not the FAA, has purchased radiation detection badges for members in several locations since the FAA was not providing this important protection.

In addition, several employees report rodent problems at their facilities, with many employees stating that rodents are common at the older facilities. For example, at the Radio Communication Link facility for the Kansas City Downtown Municipal Airport, there has been a problem with rodents for over five years; at the Columbia VOR facility in Missouri, rodent infestation has been a problem for more than 10 years; and problems have also been reported at the Pecos and Ft. Stockton VOR facilities in New Mexico. Exposure to rodents has been shown to lead to infection, such as hantavirus disease, a respiratory disease transmitted when individuals breathe contaminated air or otherwise come in contact with the virus through rodent urine, droppings or saliva.

Unstable Building and Infrastructure Conditions

Regardless of the unstable building and infrastructure conditions at FAA facilities, employees must still perform work at these facilities in order to maintain the safety of the NAS. For dedicated FAA technicians, there have been occasions when these employees are required to work under conditions that present a real threat to their personal safety. Making the situation worse is that employees are usually performing this work alone without the required support of having another individual present in case there is an accident. PASS has learned of numerous instances in which employees have suffered actual injury due to unstable building or infrastructure conditions, including cases in which employees fell through rotting floors or fell off unstable stairways.

As with the health-related problems detailed above, the FAA finally took steps to correct dangerous conditions in Detroit after PASS publicly reported on the problems. The FAA had knowingly failed to address many of the infrastructure problems at six facilities in Detroit, ignoring the conditions for nearly a decade in some cases. In some of the facilities, water had penetrated the buildings, causing damage to the floors, walls and ceilings, thus rendering them unstable, and there were at least two incidents of employees falling through the floors due to these conditions. The negative media attention and the threat of an OSHA report following the PASS press releases has resulted in the FAA addressing these unsafe working conditions it had been disregarding for years.

In other instances, the FAA has ignored safety recommendations made by independent companies. For example, in 1988, the FAA installed a Medium Intensity Approach Lighting System and Runway

Alignment Indicator Lights (MALSR) at the Wilkes Barre/Scranton International Airport in Wilkes Barre, Penn. The MALSR is used by pilots during instrument landing approach to align the aircraft with the centerline of the runway. The Wilkes-Barre MALSR, consisting of 11 towers and an 80- to 90-foot-high catwalk connecting the towers, was installed on top of an abandoned mine. Over time, the mineshaft began to collapse, affecting the stability of the MALSR installation. The structural problems grew progressively worse, and in 1990, an engineering consulting firm performed an analysis of the problems with the supporting towers and walkways. In its report to the agency, Esmer & Associates, Inc. Consulting Engineers detailed extensive structural problems with one of the towers, including buckling and twisting. In addition, the guy wires that supported the tower were uneven, meaning that the wires on one side of the tower were loose and the wires on the other were extremely tight, leading to a dangerously unstable structure. The engineering company concluded that “it is prudent practice on the part of the FAA not to maintain this facility at the present time because of the unknowns about the structural integrity of this facility due to liability consideration.”⁴ The company provided options for the FAA to address the problems and emphasized that while the tower was being repaired, “FAA maintenance personnel should not maintain the facility to ascertain prevention of future liability.”⁵

Disregarding these recommendations and additional safety violations at the Wilkes Barre MALSR, the FAA made no changes to protect its employees until a PASS safety representative performed an evaluation in 2004. Motivated by this report, which was sent to upper levels of management, the FAA finally corrected some of the more serious OSHA violations, but nothing was been done to make the tower stable and the problem remains to this day. In other words, despite being specifically told that the tower was unsafe for employees, the FAA has knowingly been allowing technicians to work on the tower for *over 17 years*.

In other examples, improper or unstable housing of high-voltage equipment poses a threat to employees required to work with such dangerous equipment. It should be expected that this FAA equipment would be given the utmost attention in terms of being properly housed in order to avoid endangering the employees working on the equipment and ensure that the equipment works properly. In many FAA facilities, however, this is not the case. The building housing Runway End Identifier Lights, which provide rapid and positive identification of the approach end of a particular runway, at the Allegheny Airport in Allegheny County, Penn., includes several high-voltage transformers. Requirements for high-voltage transformers dictate that they should be enclosed in metal enclosures. One transformer located outside the building at the facility is inside a chain link enclosure. Inside the building, however, is a second transformer with only some wood railing around it and a loose plywood cover (see Picture C). Placing a high-voltage transformer in a wooden container with an inadequate cover is in direct violation of the requirements for housing such equipment. Even more disturbing is that this has been the situation at the facility for decades despite an annual requirement for safety inspections.

⁴ Esmer & Associates, Inc. Consulting Engineers letter to Peter Macaluso, Federal Aviation Administration, regarding Problems with MALSR System and Supporting Towers and Walkways, Wilkes Barre/Scranton International Airport, May 7, 1990, p. 1.

⁵ Id., p. 7.



Picture C: Runway End Identifier Lights, Allegheny Airport in Allegheny County, Penn.

The following additional examples highlight the many dangers involved with such perilous working conditions:

- The tower for the MALSR at Allegheny Airport is in critically unstable condition, threatening the safety of employees as well as private citizens who reside near the tower. Employees working on the MALSR tower have reported that the base shifts when they are working on it. Local FAA management told a PASS safety representative that they were aware of the cracks, but that the tower had been deemed stable in an engineering report. However, management would not provide the PASS safety representative with a copy of the report. An employee was witnessed climbing the tower and, as soon as he moved around on the platform at the top, he was ordered back down because the steel base of the tower shifted on the concrete foundation and even lifted slightly in one corner, an indication that the bolt was pulling free from the concrete (see Picture D). This is not only an obvious threat to FAA employees, but the nearby residence is at risk of being destroyed if this tower fell down (see Picture E). Management has since labeled the tower as off limits for employees. Furthermore, the entire lighting array is wired together so if this tower goes down in a storm, the whole lighting system for the runway will go out.



Picture D

Medium Intensity Approach Lighting System and Runway Alignment Indicator Lights (MALSR), Allegheny Airport in Allegheny County, Penn.



Picture E

- The VOR facility in Litchfield, Mich., is deteriorating and in desperate need of repair or replacement. The building is in a severe state of general disrepair, the door is rusted and not sealing correctly, and the antenna platform is physically rotting away (see Picture F). The VOR is a type of radio navigation system for aircraft, and the stability of the VOR and its antennas is crucial for the proper operation of this facility.



Picture F: VOR Facility, Litchfield, Mich.

- Conditions at the Remote Transmitter and Receiver facility in Wichita, Kan., which supports the Air Traffic Control Tower and runway navigational aids, are placing employees in serious danger. The facility has a rotting floor, which is an obvious hazard to employees working at the facility. Even more disturbing is that the door handle locks behind you when you enter the building, meaning that an employee could feasibly get trapped inside the building. This has been the situation at the facility for more than 12 years.
- The Remote Communications Air to Ground facility in Rangle, Colo., has a single point 90-foot antenna tower. The concrete base of the tower is deteriorating. Since this is a single point tower, there are no other legs to hold the structure in place if the central point collapses.
- Facilities housing the localizer, glideslope and middle marker in Tulsa, Okla., and Bartlesville, Okla., have been in terrible condition for over five years. The floors at the facilities are buckled, walls are corroded and moldy, and tiles are protruding from the floor. The equipment located at this facility is vital to air navigation and communicating with aircraft.

PASS and the FAA employees we represent are constantly trying to communicate the dangers associated with unstable building and infrastructure conditions to the FAA as well as attempting to gather additional information on this critical subject. Unfortunately, although the FAA should be making every effort to improve working conditions for its employees, PASS's efforts have largely been stonewalled or ignored. Even more disturbing is that PASS's requests for further information from the FAA, including safety inspection reports, injury reports and employee safety training reports, has been denied.

Systems and Equipment Threatened by Infrastructure Issues

Since the FAA has allowed many infrastructure issues to get worse over the years, equipment and systems has been put at risk. While the FAA has always maintained a strong public position that modernization of the NAS is critical to the agency's success, it has seldom included the buildings and facilities that support the NAS as part of the equation, routinely placing modern, state-of-the-art equipment into facilities not suited to house such equipment.

The FAA is putting its most recent modernization plan, the Next Generation Air Transportation System (NextGen), at risk of failure because the current FAA facilities cannot accommodate the new systems without major work, which the FAA has yet to include in its planning. The FAA must make improving FAA air traffic control facilities and working conditions a priority in order to ensure successful modernization of the air traffic control system.

Consider the following examples of vital aviation equipment being put at risk due to infrastructure problems:

- Problems with the fencing surrounding the long range radar facility in Mt. Humboldt, Ariz., create a serious security threat at the facility. Since the fence does not fit flush against the ground, it is possible for someone to crawl under the fence and be quickly within the perimeter. Management has been repeatedly told of this problem over the last several years, but nothing has been done to correct the situation. In addition, security sensors on the facility windows do not work, which means anyone could come through the window and no alarm would sound.
- The radar communications building for the environmental support unit for the Chicago Midway radar facility, which also acts as a backup to Chicago O'Hare International Airport, is in terrible condition, including rusting doors, peeling siding and general disrepair (see Picture G). There is also water damage from a leaky roof on the building that houses the communication equipment less than 15 feet away. A gap under the doorway leading into the building allows water and rodents/insects to enter the building (see Picture H). Additionally, the exposure to outside conditions causes temperature to vary greatly within the building due to escaping heat or air conditioning, which in turn can affect NAS equipment performance.



Picture G
Radar Communications Building, Chicago Midway Radar Facility, Indiana.



Picture H

- A leaking roof at the Denver Terminal Radar Approach Control (TRACON) facility is putting the important aviation equipment within the building at risk of being damaged. A makeshift “leak catcher” has been installed at the facility instead of fixing the problem (see Picture I). The leak catcher runs from the ceiling into a bucket on the floor. The tubes are mere inches from the air handler, power cables and outlets. This has been the condition at this facility for over a year.



Picture I: Denver TRACON

- The Outer Marker at the Peachtree Dekalb Airport in Georgia sits in an unsecured location beside a gas station at a busy four-way intersection (see Picture J). Although a technician has informed the FAA that the platform is unstable and too small to conduct maintenance activities, no corrective action has been taken for over two years.



Picture J: Outer Marker, Peachtree Dekalb Airport

- At a Tactical Aircraft Control and Navigation facility near Kansas City, a leaking roof resulted in an equipment outage when water interfered with the operation of the equipment. Water leaked into a cabinet at the facility, which provides pilots with continuous information regarding range and bearing, causing a five-hour delay in June 2007. Employees at the facility have put a plastic sheet over the equipment to protect it from future leaks.
- There is no air conditioning at the Lakeland Outer Marker located near Tampa, Fla. The outer marker is the principle point that defines the beginning of the instrument landing system procedure during inclement weather and requires air conditioning in order to properly cool the electronics equipment and prevent excess humidity. The state of the facility is obviously a major problem for the employees as well since the lack of proper air conditioning has led to mold developing at the facility.
- Additional examples of problems with rotting or unstable floors and leaking or unsteady roofs, both of which threaten the safe operation of the equipment within the facilities, include the following:
 - The VOR facility in Galveston, Tex., is on stilts due to a rotting floor. This has been the case at the facility for over five years.
 - The VOR facility in Virginia Key, Fla., has had floor problems for years, placing the equipment at risk of being damaged. The floor is rotting and spongy and employees are concerned that it could collapse completely if the conditions are not addressed.
 - Two additional VOR sites in Putnam, Conn., and Templeton, Mass., are both very old structures with leaking roofs and rodent issues. Although this has been a problem at these two facilities for years, placing the VOR equipment risk, management appears interested in renewing the lease at the sites despite the current conditions.
 - The leaking roof at the VOR facility in Hallsville, Mo., is threatening the operation of the equipment. Employees at the facility have been forced to place plastic sheeting over the equipment to protect it from further damage and outages. The roof has been leaking for approximately five years.

Conclusion

The FAA has a responsibility to guarantee a safe working environment for its employees as well as ensuring that every effort will be made to see that infrastructure issues do not interfere with system and equipment operation. FAA neglect of these issues has led to dangerous working conditions, unstable housing of vital air traffic control equipment and systems, and negative health impact on many of its employees. The FAA has recently introduced an ambitious plan to modernize the air traffic control system. However, such a plan cannot be executed without a stable infrastructure in place. To continue moving forward with plans to modernize the NAS without first ensuring a solid infrastructure will only increase the likelihood of problems and even more dangerous working conditions in the future.

We are very pleased that funding has been included in the FAA Reauthorization Act of 2007 (H.R. 2881) to increase the FAA's facilities and equipment (F&E) account in order to enable the FAA to address the multiple infrastructure issues within the NAS. PASS is in full support of this legislation and looks forward to working to improve the air traffic control infrastructure as well as working conditions for our members. In pursuit of this, and in order to ensure a stable infrastructure, PASS

believes that it is important that the FAA consult with the employees who work within the NAS infrastructure everyday. As such, PASS is pleased that language is included in H.R. 2881 that requires the FAA to include stakeholders in modernization projects, which should include NAS facility infrastructure issues.

FAA technicians are vital to the safe operation of this country's aviation system. Providing them with a safe work environment should not even be up for debate. The FAA should be held responsible for ensuring that these dedicated federal employees have fundamental protection and that the NAS infrastructure is stable and secure in order to allow these workers to fulfill their very important responsibility of protecting the safety and efficiency of this country's aviation system.